



ACTIVITY BASED COSTING IMPLEMENTATION – A REVIEW STUDY

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ABSTRACT

The study reviewed the studies relevant to the various factors affecting the implementation of ABC system, the importance of adoption of ABC system, motives for the adoption of ABC system, challenges faced in ABC system adoption and the limitation which are the reasons for not the adoption of ABC system

Keywords: ABC system, business, Activity-based costing systems

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1. INTRODUCTION

This literature review study presents the prior studies conducted in the area of activity-based costing (ABC) concerning its implementation. Objective of this literature review is to highlight what has been done so far in any field of interest. Some of the important studies which are relevant to the present study, explaining the factors affecting the implementation of the ABC system, benefits associated, challenges and limitations for the adoption of the ABC system are considered in this study.

Based on previous studies the literature review is categorized into four categories which comprise:

- Factors affecting Adoption/Implementation of Activity Based Costing.
- Comparative analysis of traditional costing system and Activity Based Costing.
- Various Benefits/Motives for the implementation of Activity Based Costing.

- Various challenges to be faced during the implementation of Activity Based Costing or Barriers for the adoption of Activity Based Costing.

2. FACTORS AFFECTING IMPLEMENTATION OF ACTIVITY BASED COSTING

Several factors have been identified by the researchers during their study which plays a significant role in the adoption/implementation of Activity Based Costing system. the size of the firm, product diversification, complexities in the production process, overhead cost, competition, top management support, etc., are some of the important factors which significantly contribute to the adoption of ABC system in any organization. The followings are some of the studies which are related to the factors determining the use of ABC system:

Arora and Raju (2019) analyze the factors influencing the ABC system's adoption in India. The size of the organisation, overhead percentage cost, cost audit requirement, and the method of accounting are all statistically important factors in the ABC system's adoption, according to the study.

Arora and Raju (2017) the researchers attempted to know the association between size of the organization and ABC adoption. Study found a strong association between the above variables. The study used the total number of employees in the organisation after converting them into log values to determine the size of the organisation.

John (2014) studied the impact of competition on the adoption of the ABC system in 24 Nigerian random selected manufacturing firms. Researcher found a significant relationship between the competition level and the use of the ABC system. It implies that due to the increase in the competition level firm are motivated to adopt the ABC system.

Rbaba'h (2013) The association between firm parameters, such as size of the organisation as assessed by total number of people, product variety as evaluated by the number of items used, degree of overheads, and ABC implementation. According to the findings, there is no substantial link between ABC system adoption and the above-mentioned firm characteristics.

Elhamma (2012) the relationship between firm size, performance, and the application of the ABC system was investigated in 62 Moroccan firms. The association between the use of ABC and the firm's size is determined using logistic regression analysis. The size and utilisation of the ABC system were found to have a substantial beneficial association, according to the study. The companies who choose ABC saw an improvement in their performance.

Ahmadzadeh (2011) studied 57 Iranian companies to determine the relationship of the following factors: type of the industry, organizational size, the structure of cost, significance of the cost information and product diversification on the uses of the ABC system. The study found cost information importance; the structure of cost is positively associated with the ABC adoption.

Fei and Isa (2010) studied 106 manufacturing firms in China to know the impact of corporate culture and organizational structure on ABC system adoption. Outcome orientation, attention to detail, innovation and team orientation are the factors considered under corporate culture. Centralization and formalization are the factors considered for organizational structure. The study found outcome orientation and formalization as the statistically significant factors for the ABC system adoption.

Brierley (2008) Studied 200 British manufacturing companies to determine the association between the use of the ABC system and four factors i.e., competition level, product customization, cost of the overhead and the size of the firm. The level of competition, product diversity, and manufacturing overhead costs were the factors to be found to have no significant

relationship with the use of an activity-based costing system. The study found firm size is related to ABC system adoption in organizations.

Charles & Hansen (2008) found in their study that due to the increase in product diversification and increase in competition the companies are adopting the ABC system. Due to the failure of the traditional costing system to give correct cost data companies are also focusing on the adoption of the ABC system. One more reason was found in the study behind the adoption of the ABC system was to take more appropriate decisions as the ABC system provides more detailed cost information.

Khalid (2005) to identify the motivating elements for the implementation of the ABC method, researchers looked at 39 of Saudi Arabia's top 100 companies. The size of the firm and the application of the ABC system are favourably associated, according to the study. Furthermore, the study discovered no link between the adoption of the ABC method and the degree of overheads.

Roztocki & Schultz (2003) conducted a study of 215 U.S., Canadian, American, Europeans, and Asian firms to know the position of Implementation of ABC system. The study found that the larger firms are more likely to implement the ABC system as compare to the firm having small in size.

Bhatta (2001) conducted a study on ABC system implementation and found that most of the companies recognize that the cost systems they are following. The methods companies are using to allocate costs are not adequate and are obsolete. He concluded that more precise cost information can be provided by the ABC system which can give a company a competitive edge.

Trond (1997) in his study considered 75 manufacturing organizations of Norway to know the importance of the structure of cost, level of competition, number of products/product diversity and firm's size for the implementing of the ABC method. The researcher concluded that the only factor contributing to the adoption of ABC method was structure of the cost. The study also concluded that level of competition, product diversity and the size of the firm don't contribute significantly.

Maurica (1997) examines the effect of two factors (contextual factors and organizational structure) on the adoption of the ABC system. The researcher collected data through the mail from 161 Canadian manufacturing firms. The study concluded that the firms having a higher level of vertical differentiation are adopting the ABC system more. More formal organization and organizations which are more decentralized are adopting ABC more as compare to the low formal organization and decentralized firm.

3. COMPARATIVE ANALYSIS OF TRADITIONAL COSTING SYSTEM AND ACTIVITY BASED COSTING

Lu, Wang, Wu, & Cheng (2017) the cost information collected from the traditional costing system, which was based on volume, and the ABC system were compared in the case of a bicycle firm in Taiwan. The investigation discovered that the cost data obtained by the previous costing system, which used volume as a single basis for apportioning overhead costs, was incorrect. Cost, on the other hand, information obtained through the ABC approach was more accurate and useful in determining the pricing of items more effectively and providing a competitive advantage.

Sharma and Gupta (2010) studied 105 Indian manufacturing companies to know the reason of paradigm shift from traditional costing system to the alternative method of costing technique. Study found that due to an increase in competition level, rapid changes in demand of the consumer and product diversification are the reason behind the use of the alternative costing technique. The traditional costing system seems to be inaccurate particularly for

overhead cost distribution. The ABC system provides more accurate and reliable cost data which helps the management to make more precise decisions. Hence the study concluded that ABC system is better as compare to the traditional costing system.

Narong (2009) conducted a study to know whether by using the ABC system we can overcome the limitations of the traditional costing system. The researcher claimed that most of the firms are having the perception that the costing system they are using is not very much accurate and reliable for the decision-making process at present competitive world. The methods they are using are obsolete and don't provide a clear picture of the cost of each activity whereas the ABC system provides more accurate and reliable cost information which is very useful from a decision-making point of view.

Nachtmann & Al-Rifai. (2004) conducted a case study of "Application of ABC system in an air conditioner manufacturing company". The study by using descriptive analysis concluded the company was not able to capture the relevant and accurate cost information under the traditional costing method. The company successfully implemented the ABC system and found that the product does not consume the cost of overhead based on volume as done under the TCS system. Researchers found that three products out of seven products were losing money; hence need to increase the selling price.

3. VARIOUS BENEFITS/MOTIVES FOR THE IMPLEMENTATION OF ACTIVITY BASED COSTING

Several benefits/motives associated with the implementation of the Activity-based costing systems which were studied by the researchers. Improvement in financial performance, accurate product pricing, budgeting, and customer profitability analysis, cost control, selling price determination, finding non-value adding activities, etc., are the factors considered behind the adoption of the ABC system in any organization.

Almedia & Cunha (2017) studied the case of the Portuguese coffee producing company. The study observed that implementation of the ABC system helps to take the accurate decision in various domains such as ascertainment of more accurate cost data, determination of correct selling price, to identify the process where the need for improvement is. The study also found that high product diversification and increase in the competition are the main reasons for which the traditional costing system is not appropriate hence there is a need for adoption ABC system.

Shaban and Mazhar (2014) studied 18 manufacturing companies of India operating in Allahabad city to know the advantages of the ABC System adoption. They found following were the expected benefits behind the application of the ABC system – helps to estimate the cost of the product accurately, taking administrative decisions like selling price determination and exclusion of non-value adding activities. They also suggested to the companies should gradually start applying the ABC system as the system is having so many advantages and benefits.

Aggarwal & Kumar (2014) studied large and mid-sized Indian companies whose turnover is more than 500 million rupees. The objective was to know the ABC system adoption in Indian companies and its impact on ABC adoption on the financial performance of the organization. The study considered 50 companies in various sectors. Researchers found a significant positive correlation between the size and operating profit for the sample as well as the population. No significant correlation is found between the size and profitability ratios.

Dwivedi and Chakraborty (2014) conducted a case study regarding the application of an ABC model in a pulse mill in India. The researchers concluded that the implementation of the ABC system would provide more detailed and precise cost information for taking accurate managerial decisions such as determination of selling price, ascertaining the profitability of products, taking the decision to make or buy, etc.

Kaličanin & Knežević (2013) conducted a study to know whether the information derived from the ABC system is helpful for the efficient strategic management process or not. The study concluded that information provided by the ABC system is very useful for the organization to implement an efficient strategic management process. The study also concluded that the ABC system provides more correct cost information which helps to take operational and strategic decisions.

Narayanan and Sarkar (2002), conducted a case study of Insteel Industries at North Carolina to know whether the ABC implementation provides new information to the management and whether it helps take the more accurate decision at Insteel industry. In this study, they interviewed the top and middle-level managers and found that the ABC system provides new information to the manager which helps in the process improvement that resulted in significant cost savings and process improvement.

Chongruksut (2002) studied the reason for the ABC system acceptance in Thailand firms. Descriptive statistics were used to analyze the data and found an increase in competition, increase in cost and failure of traditional cost system to provide the actual product cost are the important reasons for adoption of ABC system.

Basteki and Ramadan (1998) studied 31 manufacturing Bahrain firms to know the motives for implementations of the ABC system. The study found ABC system helps in controlling the cost and cost reduction are the most important motives for implementing ABC system. Product profitability analysis and finding out accurate information for pricing decisions were also found other vital motives for the adoption of the ABC system for the Bahrain firms.

4. CHALLENGES TO BE FACED DURING THE IMPLEMENTATION OF ACTIVITY BASED COSTING OR BARRIERS FOR THE ADOPTION OF ACTIVITY BASED COSTING

As we are aware it is not very easy to adopt a new system in any organization as human beings are not ready to accept the changes easily. In the prior studies, researchers have studied the various challenges faced by the organizations during the implementation process of the Activity-based costing system. Further, the studies are conducted to know the reason why the organizations are not interested to adopt the ABC system. Lack of technology, resistance to change, satisfied with the current system, cost and complexity involved with the implementation of ABC system, identifying the cost drivers, lack of experts etc., are the reasons determined by the researchers as the main challenges during the implementation process of ABC system.

Manríquez, Colomina, & Pastor (2014) researchers studied 180 SMEs of Mexico to know the feasibility of the implementation of the ABC system. Lack of awareness and lack of knowledge of the ABC system and huge cost involved in the adoption process of the ABC system were determined as the major causes for not implementing the ABC system. So, the Mexican SMEs are using the traditional costing system for their decision making. Descriptive statistics and charts were used to analyse the data.

Rundora, & Selesho (2014) conducted a study to determine the barriers for ABC system adoption in South Africa. The study used T-test and descriptive statistic to analyze the data and concluded the high cost of the adoption of ABC system, lack of suitable technology, lack of understanding of ABC system and involvement of time are the important reasons for not adopting the ABC system.

Shil and Pramanik (2012) surveyed 25 textile and garments Bangladeshi companies to study the application of ABC in the manufacturing sector. The study found that ABC is not

adopted due to the various reasons some of them are - use of the manual technique of accounting, the accountant is quite old and not ready to adopt new technology, lack of software.

Fawzi (2008) studied Irish companies to know the reason for not adoption of ABC system. The researcher used descriptive analyses and found that ABC is not relevance, satisfaction with the current cost allocation system, fewer products, less overhead cost as the most important reasons for not adoption of ABC system.

Khasharmah (2007) surveyed Jordan industrial companies to identify difficulties and obstacles faced at the time of implementing the ABC system. The researcher found only ten percentage firms of the sample study are using the ABC system, reason behind the low implementation rate was found that the companies are convinced with the cost system that they currently have.

Anand, Sahay, and Saha (2005) studied 53 Indian companies to examine the difference in the performance of ABC adopted firms and ABC non adopted firms. The study concluded that the companies who have implemented the ABC system were generating more accurate cost information as compared to those companies who have not adopted ABC system. The study identified the difficulties faced by ABC users who are designing the ABC system and identifying the cost drivers.

Khalid (2005) studied 39 of the 100 largest firms in Saudi Arabia to recognize the challenges to be faced during the ABC system adoption. The study found lack of experts, difficult to find the accurate cost drivers and lack of top management support as the major issues.

5. CONCLUSION

The study reviewed the studies relevant to the various factors affecting the implementation of ABC system, the importance of adoption of ABC system, motives for the adoption of ABC system, challenges faced in ABC system adoption and the limitation which are the reasons for not the adoption of ABC system. From the above, we can conclude that in India the number of studies on the ABC system is very less and in recent past also not many attempts have been made as compared to the abroad. As rightly said by Liu and Pan (2007) “a majority of ABC research still was done in developed countries and very little research has been done in a developing country, especially in the Asian context. Thus, it is necessary to identify whether the Asian culture and way of doing business may have a different impact on the extent of ABC adoption and implementation”.

We can concluded that though the ABC system is superior to the traditional costing system but awareness and implementation rate of the ABC system is still near to the ground in India.

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